

REMARKS

This amendment is in response to the Official Action dated March 20, 2009. Claims 1 and 13 have been amended, claims 2-4, 6-12 and 15 have been canceled without prejudice or disclaimer, and no claims have been added; as such, claims 1, 5, and 13-14, and 16 are now pending in this application. Claims 1 and 13 are independent claims. Reconsideration and allowance is requested in view of the claim amendments and the following remarks. In the amendment, claims 1 and 13 have been amended to clarify the features previously recited. Support for the amended claims can be found in paragraphs [0062-0063] as represented in U.S. Pub. No. 2007/0228913.

35 USC § 102 Rejections

Claims 13 and 14 have been rejected under 35 U.S.C. § 102(b) as being as being anticipated by Sato (JP 07-014542, hereinafter referred to as “Sato ‘542”). Applicant respectfully traverses this rejection.

Claim 13 recites:

A method for manufacturing a discharge lamp electrode, the method comprising:

a winding step of winding a wire to form a heater, said heater having a coil portion and a first lead wire portion and a second lead wire portion that extend respectively from a rear end of the coil portion;

a connection-reinforcing-member-welding step of welding the first lead wire portion of the heater to a first connection member of a connection-reinforcing member, and of welding the second lead wire portion of the heater to a second connection member of the connection-reinforcing member, said connection-reinforcing member including the first and second connection members with them being integrated with each other by means of a coupling portion;

an application step of applying an electron emission material to the heater in a condition where the heater is held by the connection-reinforcing member;

a sleeve welding step of welding a sleeve lead wire to any one of the first and second connection members and inserting the heater into the inside of a scattering-prevention member, which is a cylindrical sleeve;

a lead-in portion welding step of welding a first lead-in wire to the first connection member and a second lead-in wire to the second connection member; and

a cutting step of cutting off the coupling portion from the connection-reinforcing member to separate the first and second connection members from each other.

Sato ‘542 fails to disclose, teach or suggest these claimed features.

In particular, Sato ‘542 fails to disclose, teach or suggest “*a sleeve welding step of welding a sleeve lead wire to any one of the first and second connection members and inserting the heater into the inside of a scattering-prevention member, which is a cylindrical sleeve.*”

Sato ‘542 discloses a discharge lamp where leads 5 and 5 of a couple are introduced from the both ends of the container 1, respectively, and has coil 6 which was wound spirally and formed in the shape of an abbreviated U character. The end of coil 6 is being fixed by spot welding in the state where turn the direction which is substantially in agreement with the shaft orientations of lead 5, and it was inserted into the lead concerned via corrosion plate 7.

The end of coil 6 is pinched by that a cross section is fabricated by half-rate arc shape, and the tip part of lead 5 and each of the above-mentioned corrosion plate 7 oppose the tip part and the corrosion plate 7 of lead 5 concerned. In this state, melting coagulation of the lead end face twist of corrosion plate 7 is carried out selectively [spot welding], and the end of the above-mentioned coil 6 is fixed to lead 5. The end of fixed coil 6 has turned to the direction which is substantially in agreement with the shaft orientations of the above-mentioned lead 5.

Though, Sato ‘542 arguably discloses a winding step and a lead-in portion welding step, Sato ‘542 does not disclose or suggest a sleeve welding step. Indeed, there is no mention of inserting the heater into a scattering-prevention member in Sato ‘542.

- Therefore, Sato ‘542 fails to disclose, teach, or suggest a sleeve welding step of welding a sleeve lead wire to any one of the first and second connection members and inserting the heater into the inside of a scattering-prevention member, which is a cylindrical sleeve.

Furthermore, at least for the reason disclosed above, claim 14 is distinct from Sato ‘542 because claim 14 depends on independent claim 13, as well as for their separately recited patentable distinct features. For example, claim 14 recites “*a first winding sub-step of winding a wire around a core wire; and a second winding sub-step of spirally winding the wire that have been wound around the core wire without come into contact therewith; and wherein a dissolving step of dissolving the core wire is performed after the connection-reinforcing-member-welding step.*”

Accordingly, Applicant respectfully requests that the rejection of the claims under 35 U.S.C. § 102(b) as being anticipated by Sato ‘542 be withdrawn.

35 USC § 103 Rejections

Claims 1, 5 and 16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato ‘542 in view of McVey (US 4,464,603, hereinafter referred to as “McVey ‘603”).

Applicant respectfully traverses this rejection.

Claim 1 recites:

A discharge lamp comprising:

an electrode including:

a heater constituted of a coil portion and a first lead wire portion and a second lead wire portion that respectively connect the coil portion through a rear end of the coil portion, the heater having an electron emission material applied thereto; and

scattering-prevention member, which is a cylindrical sleeve whose both ends are open, for covering surrounding of the coil portion, said both open ends respectively facing the forward end and the rear end of the coil portion;

a sleeve lead wire, which is attached to said scattering prevention member at one end and to the heater at the other end; and

a connection-reinforcing member that has a first connection member for connecting the first lead wire portion, and a second connection member for connecting the second lead wire portion, while the first and second connection members integrated with each other by means of a coupling portion are separated from each other by cutting the coupling portion, each of the first and second connection members being composed of L-shaped plate member, wherein the connection-reinforcing member is supported by any one of the first and second connection members;

wherein in the electrode, the first lead wire portion is connected to a first lead-in wire and the second lead wire portion is connected to the second lead-in wire, said first and second lead-in wires being provided on two opposed ends of a glass tube in which a gas containing a light-emitting material is enclosed and to an interior of which fluorescent substance is coated;

wherein the coil portion is arranged vertically along a tube axis of the glass tube; and

wherein the coil portion is structured by a spiral wire with it being further wound spirally and without coming into contact therewith.

Sato ‘542 fails to disclose, teach or suggest these claimed features.

As stated above, Sato ‘542 fails to mention “*a scattering-prevention member, which is a cylindrical sleeve whose both ends are open, for covering surrounding of the coil portion, said both open ends respectively facing the forward end and the rear end of the coil portion.*”

Indeed, there is no mention of a scattering-prevention member in Sato ‘542.

Furthermore, Sato ‘542 fails to disclose, teach or suggest “*a sleeve lead wire, which is attached to said scattering prevention member at one end and to the heater at the other end.*”

Again there is no mention of a sleeve lead wire in Sato ‘542.

Furthermore, McVey ‘603 does not remedy the deficiencies of Soules ‘477, as the various features recited above are also absent from McVey ‘603. For example, Applicant’s claimed features of “*scattering-prevention member, which is a cylindrical sleeve whose both ends are open, for covering surrounding of the coil portion, said both open ends respectively facing the forward end and the rear end of the coil portion; a sleeve lead wire, which is attached to said scattering prevention member at one end and to the heater at the other end,*” are neither disclosed nor suggested by McVey ‘603.

McVey ‘603 discloses an end closure for a tubular light-transmitting ceramic envelope used in sodium vapor lamps. More particularly, the end closure comprises a ceramic disc fitted into one end of a metal sleeve having a different diameter opening at its opposite end as well as an arc tube inserted therein and hermetically sealed by a ceramic sealing frit. The ceramic disk includes a central opening for passage of a thermionic electrode which is also hermetically sealed with a ceramic sealing frit. The end closure can only be used for the conventional fluorescent lamp configuration as disclosed in paragraph 4, lines 21-27 of McVey ‘603.

Clearly, McVey ‘603 does not disclose or even suggest a scattering-prevention member for covering surrounding of the coil portion wherein the coil has a first lead wire portion and a second lead wire portion that respectively connects the coil portion through the rear end of the coil portion or a sleeve lead wire.

- **Therefore Sato ‘542 and McVey ‘603 fail to disclose, teach or suggest scattering-prevention member, which is a cylindrical sleeve whose both ends are open, for covering surrounding of the coil portion, said both open ends respectively facing the forward end and the rear end of the coil portion; a sleeve lead wire, which is attached to said scattering prevention member at one end and to the heater at the other end.**

Since even a combination of the relied upon references would still fail to yield the claimed invention, Applicant submits that a prima facie case of obviousness for claim 1 has not been presented. Applicant also notes that the offered combination appears to be a failed attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine the fluorescent lamp electrode of Sato ‘542 with the end closure of McVey ‘603.

For the reasons stated above, claims 5 and 16 overcome the combination of Sato ‘542 and McVey ‘603 because they depend on independent claim 1, as well as for their separately recited patentable distinct features. For example, claim 5 recites “*a forward end of the coil portion is arranged toward an interior of the sleeve without it exceeding an open end face of the sleeve at the forward end side thereof*.”

Accordingly, Applicant respectfully requests that the rejection of claims 1, 5 and 15-16 under 35 U.S.C. § 103(a) as being unpatentable over Sato ‘542 in view of McVey ‘603 be withdrawn.

Conclusion

In view of the above amendment and remarks, applicant believes the pending application is in condition for allowance.

This response is believed to be a complete response to the Office Action. However, Applicant reserves the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicant expressly does not acquiesce to the taking of Official Notice, and respectfully

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request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-3175 from which the undersigned is authorized to draw.

Dated: June 8, 2009

Respectfully submitted,

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